

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 157766.7 SB	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, Item 5 below.	
International application No. PCT/IL2005/000043	International filing date (day/month/year) 13/01/2005	(Earliest) Priority Date (day/month/year) 15/01/2004
Applicant BIOLAB LTD.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IL2005/000043A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07F9/6584 C07F9/113 A61K31/661

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07F A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data, BEILSTEIN Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LORENZ, PETER ET AL: "Synthesis of N-Lost derivatives. II. Reaction of N,N-bis(2-chloroethyl)phosphoramidic dichloride with 1-aminopropane-2,3-diol" ARCHIV DER PHARMAZIE (WEINHEIM, GERMANY), 319(11), 1023-7 CODEN: ARPMAS; ISSN: 0365-6233, 1986, XP008045159 examples 9-14	1-14,21, 22
X	US 5 220 043 A (DONG ET AL) 15 June 1993 (1993-06-15) columns 1,2,8 claims 15,16 example 1 ----- -/-	35,43, 44,55,56

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

13 April 2005

Date of mailing of the international search report

26/04/2005

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

Seitner, I

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL2005/000043

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SHIBAGAMI, MOTONARI ET AL: "Preparation of sphingolipids for pharmaceuticals and cosmetics" XP002323215 retrieved from STN Database accession no. 2004:17805 CAS RN: 641628-10-6; 641628-11-7 abstract -& JP 2004 002215 A (NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY, JAPA) 8 January 2004 (2004-01-08) pages 5,13</p>	35-44, 55,56
X	<p>DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; TAMAI, TADAKAZU ET AL: "Preparation of amino alcohol phosphates and their use as Edg (endothelial differentiation gene) receptor antagonists for treatment of diseases" XP002323216 retrieved from STN Database accession no. 2003:371676 CAS RN: 524730-19-6; 524730-19-6; 524730-22-1 abstract -& JP 2003 137894 A (NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY, JAPA) 14 May 2003 (2003-05-14) pages 2,5</p>	30,54
X	<p>WO 99/41266 A (EMORY UNIVERSITY; LIOTTA, DENNIS, C; MERRILL, ALFRED, H., JR; KEANE, T) 19 August 1999 (1999-08-19) examples 16a,16b,17a,17b</p>	35,43,44
X	<p>WO 95/21848 A (THE UNITED STATES OF AMERICA, REPRESENTED BY THE) 17 August 1995 (1995-08-17) page 7; example III claim 22</p>	30,54
X	<p>WO 93/19760 A (THE BIOMEMBRANE INSTITUTE) 14 October 1993 (1993-10-14) figure 2; examples 1,5</p>	54

-/--

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL2005/000043

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	RAMSTEDT, BODIL ET AL: "Comparison of the biophysical properties of racemic and D-erythro-N-acyl sphingomyelins" BIOPHYSICAL JOURNAL , 77(3), 1498-1506 CODEN: BIOJAU; ISSN: 0006-3495, 1999, XP002323211 scheme 1 abstract	43,44, 55,56
X	KRATZER, BERND ET AL: "Efficient synthesis of sphingosine 1-phosphate, ceramide 1-phosphate, lysosphingomyelin, and sphingomyelin" LIEBIGS ANNALEN , (6), 957-63 CODEN: LANAEM; ISSN: 0947-3440, 1995, XP002323212 scheme 1: examples 1, 2, 4 scheme 3: examples 13, 15 scheme 4: examples 1, 4, 19, 21	30,35, 43,44,54
X	ZANGLIS, ANTHONY ET AL: "The biological activity of acetylated sphingosylphosphorylcholine derivatives" INTERNATIONAL JOURNAL OF BIOCHEMISTRY & CELL BIOLOGY , 28(1), 63-74 CODEN: IJBBFU; ISSN: 1357-2725, 1996, XP002323213 figure 1; examples I,II,III	35,43,45
X	HANS-PETER DEIGNER AND BEATRIX FYRNYS: "Rapid synthesis of 2-desoxy-2-amino-3-phosphocholine-glycerin ic-acid-alkylester, 1-alkyl-1-desoxy- and 1-o-alkyl-2-desoxy-2-amino-sn-glycero-3-phosphocholines, -3-phospho-N,N'-dimethylethanolamine and -3-phospho-Fmoc-serine-methylester" CHEMISTRY AND PHYSICS OF LIPIDS, vol. 61, 1992, pages 199-208, XP002323214 pages 205-206; figures 1-3	1-29, 31-34, 36-42, 45-53
X	H.P. DEIGNER AND B. FYRNYS: "Synthesis of ³² P!-labelled 1-O-alkyl-2-desoxy-2-amino-sn-glycero-3-phosphocholines" JOURNAL OF LABELLED COMPOUNDS AND RADIOPHARMCEUTICALS, vol. 34, no. 2, 1994, pages 185-190, XP008045160 page 186	1-29, 31-34, 36-42, 45-53

-/--

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL2005/000043

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	C.M. THOMPSON ET AL: "Synthesis, Configuration, and Chemical Shift Correlation of Chiral 1,3,2-Oxazaphospholidin-2-ones Derived from L-Serine" JOURNAL OF ORGANIC CHEMISTRY, vol. 55, 1990, pages 111-116, XP002323263 scheme 1	15-20, 23-29, 31-34, 36-42, 45-53
X	ZHENG-JIE HE ET AL: "Synthesis of novel optically active cyclic phospholipid conjugates of tegafur and uridine starting from L-serine" PHOSPHORUS, SULFUR AND SILICON, vol. 160, 2000, pages 223-232, XP008045147 page 225	15-20, 23-29, 31-34, 36-42, 45-53

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IL2005/000043

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5220043	A	15-06-1993	NONE	
JP 2004002215	A	08-01-2004	NONE	
JP 2003137894	A	14-05-2003	NONE	
WO 9941266	A	19-08-1999	AU 765809 B2 AU 2764499 A CA 2320117 A1 EP 1053243 A1 WO 9941266 A1 US 6610835 B1 US 2004039212 A1	02-10-2003 30-08-1999 19-08-1999 22-11-2000 19-08-1999 26-08-2003 26-02-2004
WO 9521848	A	17-08-1995	US 5430169 A AU 1874295 A WO 9521848 A1	04-07-1995 29-08-1995 17-08-1995
WO 9319760	A	14-10-1993	US 5260288 A CA 2130992 A1 EP 0671917 A1 JP 8500816 T WO 9319760 A1 US 5391800 A US 5663404 A US 5877167 A	09-11-1993 14-10-1993 20-09-1995 30-01-1996 14-10-1993 21-02-1995 02-09-1997 02-03-1999